



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,061	12/02/2003	Scott Jacobs	130136	9480

7590 04/30/2007

Law Offices of John S. Munday  
PO BOX 423  
Isanti, MN 55040

EXAMINER
----------

ART UNIT	PAPER NUMBER
----------	--------------

DATE MAILED: 04/30/2007

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES PATENT AND TRADEMARK OFFICE

---

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

ed

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/727,061  
Filing Date: December 02, 2003  
Appellant(s): JACOBS, SCOTT

**MAILED**  
**APR 30 2007**  
**GROUP 3700**

---

Mr. John Munday  
For Appellant

**REVISED EXAMINER'S ANSWER**

This is in response to the appeal brief filed June 8, 2005.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments***

No amendment after final has been filed.

**(5) *Summary of claimed subject matter***

The summary of invention contained in the brief is correct.

**(6) *Grounds of Rejection***

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-4, 7-10, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frantz et al (U.S. Patent No. 5,794,627) in view of Adell (U.S. Patent No. 5,406,963). Frantz discloses in Figures 1-4 an appliance having an upper tray and a lower tray holding impression material into which a patient bites and a pull-strap (50) extending forward out of the patient's mouth. Figures 1-3 illustrates an upper and lower trays (12, 14) generally a U-shaped having front portions (26, 28), left and right sides (36, 36', 38, 38') and the sides having side troughs (16, 16', 18, 18') and the putty rope (20) are placed in the troughs (16, 16', 18, 18') as shown in Figure 3. The putty rope (20) moves around the teeth to extend into the teeth undercuts and hardens around the teeth and against the soft tissues in order to secure the traps (12, 14) onto the upper and lower teeth and tissues. Frantz discloses the appliance may be made of plastic and the putty rope placed in the appliance's troughs is an impression material. The Frantz appliance device lacks a plurality of holes therein, as recited. Adell discloses in Figures 1-5 a mouthguard (10) which generally is a U-shaped for fitting into the mouth and comprising wall (14) and trough (16, 18) on opposite sides. The mouthguard (10) includes series of holes (20) extending through wall (14). Adell discloses a liner (12) received in the trough (16, 18) and Figure 5 illustrates the liner (12) is received through the holes (12). Adell discloses the mouthguard (10) is made of ethylene/vinyl acetate copolymer. Therefore it would have been obvious to one skilled in the art to include holes on the Frantz appliance as taught by Adell as such would fill the impression putty material (20) in the holes, thereby, lock the appliance and the impression putty material together.

Art Unit: 3772

Claims 5, 6, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frantz et al (U.S. Patent No. 5,794,627), as modified above, and further in view of Ueno (U.S. Patent 5,513,984). Frantz et al discloses in Figures 1-4 an appliance having an upper tray and a lower tray holding impression material into which a patient bites and a pull-strap (50) extending forward out of the patient's mouth comprising elements as recited in these claims except for the impression material is not a gel, as recited. Ueno discloses in Figures 10 and 11 a construction of a mouthpiece wherein the ball members (3) are arranged and received in a groove (16). Ueno teaches the ball members (3) is made of thermoplastic elastomer (e.g. styrene block copolymer) which offers a softening point of higher than 100° C, higher than that of the mouthpiece. Therefore it would have been obvious to one skilled in the art during the time of the invention to utilize the styrene block copolymer, suggested by Ueno, in the Frantz appliance as such would provide cushioning effect when compressed upon contact on the user during use.

**(7) *Response to Argument***

Applicant's arguments filed on June 8, 2005 have been carefully considered but they are not persuasive.

Regarding the combination of the Frantz et al device and the Adell device, the Examiner respectfully disagrees with applicant because the combination renders all of the claimed subject matter as obvious. In particular, Frantz et al's second portion is none other than rope of putty (as shown in Figure 3) which is an impression material that moves around the bell-shaped teeth and extends into the teeth undercuts and the soft tissues. This arrangement inherently displays a cushioning effect when compressed upon contact on the user during use. Likewise, the Adell's

second portion or the liner (12) is tooth-impresssionable when the device is put to use. This enables the liner (12) to conform to the teeth of the arch, thereby, providing comfort to the teeth, and the teeth yet securely received in the liner (12). Again, such structure displays cushioning effect when compressed upon contact on the user during use. Both the Frantz et al's tray (12) and the Adell's main body (10) clearly having generally U-shape and are in teeth-engaging shape.

Regarding the teaching of the Ueno reference, the Examiner respectfully disagrees with applicant. The Ueno reference teaches the second portion or the ball members (3) formed on the first portion or the mouthpiece, and the Ueno reference teaches ball members (3) are made of thermoplastic elastomer (e.g. styrene block copolymer). It would have been obvious one of ordinary skill in the art during the time of the invention to substitute the Ueno's ball members (3) in Frantz et al's for the putty rope (20) as such would provide cushioning effect when compressed upon contact on the user during use.

With regards to applicant's first portion, the Adell's mouthguard or main body (10) is made of ethylene/vinyl acetate copolymer, which is the very material claimed by applicant in claim 2-4. The Examiner directs applicant to the specification on page 9 lines 16-20 disclosing the first portion of the present invention is formed from an inert flexible plastic including all as listed and as well as any conventional plastic or other material normally used in dental treatments, particularly those formed into trays or other mouthpieces, may be used in this invention. With that in mind, the Frantz et al teaches the trays (12) are preferably of the general type that may be referred to as bite trays, which are commonly known as the dental trays and

Art Unit: 3772

those typically are from an inert flexible plastic material. Therefore, the Frantz et al tray (12) is well within reasonable interpretation of the first outer portion.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Camtu Nguyen  
April 16, 2007

CTN

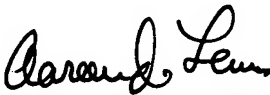
Conferees:

Patricia Bianco

  
PATRICIA BIANCO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700

4-16-07

Aaron Lewis

  
Aaron J. Lewis  
Primary Examiner

Law Offices of John S. Munday  
PO BOX 423  
Isanti, MN 55040